

Preliminary Amendment  
Attorney Docket Q65149

region of the shaped body located near the surface is modified at this temperature or/and during a succeeding cooling process in that the coating material infiltrates partially or at least partially into the region of the shaped body located near the surface, and wherein the shaped body treated in such a manner is enriched with oxygen during the cooling process or/and during a succeeding heat treatment whereby the modification contributes to the increase in remanent induction or/and to the increase in critical current density of the shaped body enriched with oxygen.

Page 19, amend the third full paragraph beginning with "Preferably, the shaped body" as follows:

Preferably, the shaped body is a cylinder, a ring, a tube or a disc consisting substantially of one or more segments wherein the alignment of the c-axes of the grains or of the one grain is substantially in line with the axis of the cylinder / the axis of the plate, or with another main direction of the shaped body, or, it is at right angles thereto.

Page 20, amend the first full paragraph beginning with "The shaped body may have" as follows:

The shaped body may have a critical transport current density of at least  $4 \times 10^4$  A/cm<sup>2</sup> in the external field of 1 T at 77 K, preferably of at least  $6 \times 10^4$  A/cm<sup>2</sup>, and particularly preferred of at least  $8 \times 10^4$  A/cm<sup>2</sup>, but more especially, of at least  $9.7 \times 10^4$  A/cm<sup>2</sup>. It may also have a fracture toughness as determined by the fracture system about the hardness impressions of at least 1 Mpa  $\sqrt{m}$ , preferably of at least 1.5 Mpa  $\sqrt{m}$ . Furthermore, it may have a bending strength of at least 300 Mpa and preferably of at least 400 Mpa.

amend the last paragraph beginning with the heading "Drawings" as follows:

Drawings:

The Figures depict the distribution of the magnetic remanent induction in respect of Example 1. Figures 1 and 3 indicate the test results for the preliminary material and Figures 2 and 4 the test results for the superconducting material that has been heat treated in accordance with the invention.

Page 24, amend the paragraphs under the heading "Example 2" as follows:

Example 2:

As in Example 1, a texturised shaped body having dimensions of  $38 \times 38 \times 12 \text{ mm}^3$  was produced. However, diverging from Example 1, Er-123 was used as the coating material. The distribution of the remanent induction following the texturising process resulted in a maximum value  $B_{z,\max}$  of the remanent induction of 902 mT (Figure 3).

The shaped body together with the coating material was then subjected to the following temperature treatment:

1. heating over 12 h to 900 °C
2. heating over 3 h to 980 °C
3. a dwell period of 3 h at 980 °C
4. cooling over 2 h to 970 °C
5. a dwell period of 10 h at 970 °C
6. cooling over 60 h to 900 °C
7. cooling over 30 h to 25 °C.

The measured distribution of the remanent induction following the infiltration process (= heat treatment) resulted in a maximum value  $B_{z,\max}$  of 990 mT (Figure 4).